

# “Chinese high-tech foreign direct investments in the EU – trends and policy responses”

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# CHINESE HIGH-TECH FOREIGN DIRECT INVESTMENTS IN THE EU – TRENDS AND POLICY RESPONSES

## Abstract

This paper aims to examine the trends of Chinese high-tech acquisitions in the EU countries, describe the policies that these acquisitions prompted on the level of member states and the EU, and analyze the effects of these policy responses. The results of the research review clearly show an increasing number of takeovers of European companies in the high-tech sectors, especially in the big member states such as Germany, France, or the UK. This created a backlash from the European policymakers that led to an introduction of tighter screening regimes in many EU member states and the creation of a common EU framework for FDI screening and its strategic management. At this point, it is hard to evaluate the complete effect of this new framework, but it must be concluded that 82 percent of the Chinese strategic acquisitions made in 2018 would fall under at least one criterion of the new EU framework. The findings of this paper provide sound recommendations for the EU countries and their public authorities targeting to control Chinese outward foreign direct investment (OFDI) and limit the acquisition of local companies in sensitive industries. On the other hand, the coming recession may put at least a temporary halt on Chinese acquisitions of the European companies.

## Keywords

Chinese OFDI, high-tech acquisitions, EU, common FDI screening framework, strategic investment management, global trade

## JEL Classification

F21, F23

## INTRODUCTION

The gradual growth of FDI (Foreign Direct Investment) inflows in the last twenty years caused the emergence and expansion of new industries. Many economic measures, e.g., in CEE countries, were undertaken aimed at providing a business-friendly environment (Virglerová, Homolka, Smrčka, Lazányi, & Klieštík, 2017; Ključnikov, Belás, Kozubíková, & Paseková, 2016; Hintošová, Bruothová, Kubíková, & Ručinský, 2018). FDI brings significant effects, among other things, concerning their higher competitiveness and business performance (Rajnoha, Merková, Dobrovič, & Rózsa, 2018; Bilan, Vasylieva, Lyeonov, & Tiutiunyk, 2019; Perkmann, 2006). FDI may help to achieve industrial renovation and improve productivity by importing high-tech technologies and new knowledge base (Horta, Kapelko, Lansink, & Camanho, 2016; Shuyan & Fabus, 2019). On the other hand, according to Buysse and Essers (2019), the acquisition of new technologies is one of the key incentives of Chinese FDI in the EU. There is ample evidence that there was an above-average interest from Chinese investors to acquire European high-tech companies, especially those with financial problems.

China has adopted an ambitious plan to expand its economic and political influence in the world. This strategic plan includes, among oth-

ers, also the Initiative “One Belt & One Road” (Callaghan & Hubbard, 2016; Huang, 2016). However, based on the research and results published in this article, it seems that this is only one part of China’s overall expansion strategy, mostly of the extensive nature. Recently, in the background of this, the complementary strategy of an intense nature has been developed, strategically focusing on acquisitions high-tech companies in the EU countries, achieving higher spillover effects (Simionescu, 2018).

Li, Luo, and De Vita (2020) investigated the effect of institutional differences on China’s Outward Foreign Direct Investment (OFDI) based on a large panel of 150 countries in 2003–2015. The findings recently published in prestigious German journal registered in Web of Science database are relatively surprising, as they show that ‘the institutional differences of government effectiveness and control of corruption between China and a host country have a statistically significant negative impact on China’s OFDI (Li, Luo, & De Vita, 2020). Their empirical evidence suggests that the “One Belt, One Road” policy does not have the expected positive influence on China’s OFDI (Li, Luo, & De Vita, 2020). They also provide a recommendation for countries aiming to attract Chinese OFDI or seeking factors to boost it. The research presented in this article focuses on the opposite view of this global challenge.

## 1. LITERATURE REVIEW

The internationalization of companies from emerging economies became an important topic in the economic literature, as these companies started to enter the international markets in increasing numbers (Li, Luo, & De Vita, 2020; Callaghan & Hubbard, 2016; Huang, 2016). Without a doubt, the internationalization of Chinese companies attracted the largest attention, as they started to challenge established competition from developed countries.

For many decades, China has been viewed typically as a host country for incoming Foreign Direct Investments (FDI). However, following the global financial and economic crisis of 2008–2009, Chinese Outward Foreign Direct Investment (OFDI) started to gain traction, and China gradually became one of the most important investor countries in the world economy. Although most Chinese OFDI still target South-East Asia, investment flows heading to EU countries increased considerably after 2012. When investing in the EU countries, Chinese companies prefer cross-border acquisitions, and one of their main motives is the acquisition of European high-tech companies.

Researching the internalization of Chinese companies, the main issue is the factors driving their internationalization and whether they differ from multinational corporations from developed countries. The widely accepted OLI framework developed by Dunning (1993) suggests that firm-spe-

cific ownership advantages play a leading role in explaining FDI activities. However, a growing body of evidence suggests that multinational corporations from emerging countries differ fundamentally from their counterparts from developed countries, and their internationalization incentives are also different (Liu, Buck, & Shu, 2005).

The available study suggests that the internationalization of Chinese companies takes a different direction in developed and developing countries. In the case of developing countries, Chinese investors prefer greenfield investments (Szikorova & Grančay, 2014), while Chinese OFDI flows to developed countries are predominantly cross-border acquisitions. Deng (2009) states that Chinese corporations are often seeking strategic assets overseas to increase their competitive advantages and address weak strategic management points. Similarly, Tan (2017) suggests that Chinese corporations use FDI to gain access to advanced markets or move in the global value chain.

Concerning the geographic distribution of Chinese OFDI, the strategic managers of Chinese corporations preferred investing in South-East Asia (dominantly Hong Kong) and into resource-rich countries in Latin America or Africa (Szikorova & Grančay, 2014). The role of Chinese FDI in Africa is especially well-documented (Busse, Erdogan, & Mühlen, 2016). Kolstad and Wiig (2012) found out that Chinese OFDI was initially attracted to large markets and countries with a combination of large natural resources and poor institutions.

This meant that European countries did not play an important role in Chinese FDI decisions until the global economic crisis of 2008–2009.

According to Buysse and Essers (2019), Chinese companies have different motivations for strategic investment management decisions in Europe, with technology acquisition being one of the most important motives. Sauvant and Chen (2013) also argue in their paper that Chinese companies often invest in companies that work at the technological frontier to gain access to their knowledge. In the EU, this behavior is typical for Chinese OFDI in Western Europe, as these economies offer advanced technologies and well-known brands (Dreger, Schüler-Zhou, & Schüller, 2017). Blomkvist and Drogendijk (2016) came to a similar conclusion as they state that the main incentives for Chinese investment in Europe are market seeking and strategic asset seeking incentives.

## 2. RESEARCH AIM AND METHODOLOGICAL FRAMEWORK

The main goal of this article is to examine the trends of Chinese high-tech acquisitions in the EU countries, describe the policies that these acquisitions

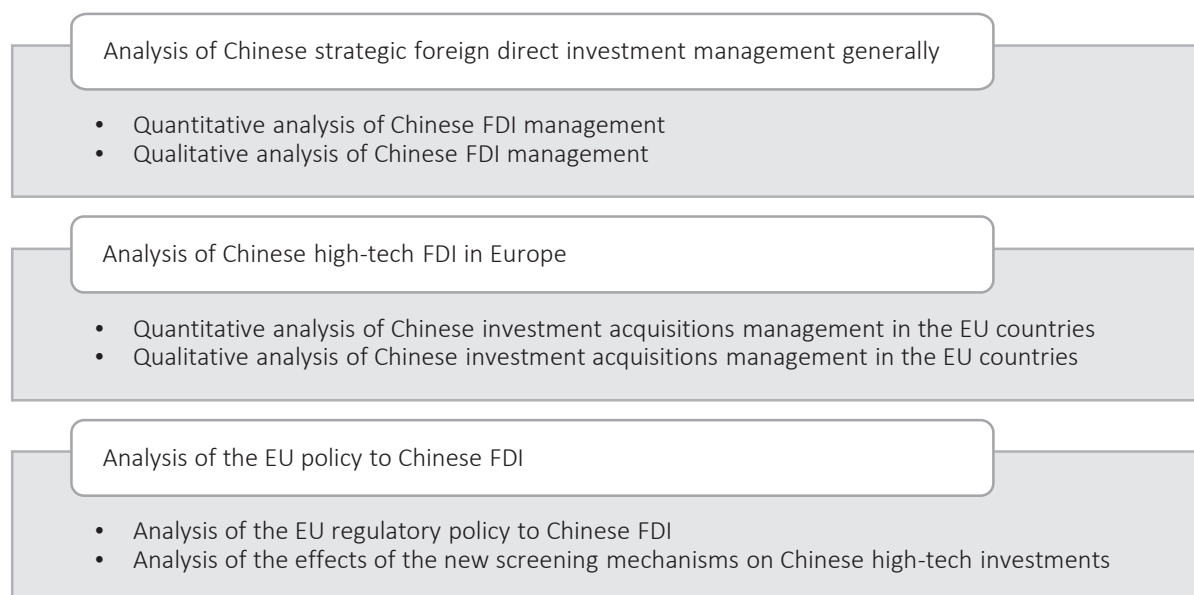
prompted on the level of member countries and the EU, and analyze the effects of these policy responses. The first part of the article maps the Chinese OFDI flows to the EU countries after 2010 and will focus on Chinese investors' most notable acquisition of European high-tech companies. The second part describes the policy responses on the EU level and in the most important EU member states (e.g., Germany, France). The third part of the article looks at the effects of the new policies on the total Chinese OFDI flows to Europe and specific acquisitions that were blocked by the new policies in force. Finally, the last part contains a discussion of the results achieved by also providing some recommendations for public authorities in the EU member countries.

The research methodology used is mostly qualitative and primarily focused on the systematic research of literature that has been published in scientific journals and by public authorities around the EU and worldwide in recent times.

In the construction of the methodology framework of the research, the following methodological procedures have been used (Figure 1):

- 1) quantitative and qualitative analysis of Chinese high-tech strategic investment management acquisitions in the EU countries after 2010;

Source: Own elaboration.



**Figure 1.** Methodology framework

- 2) analysis of the EU regulatory policy for Chinese Foreign Direct Investment (FDI) in Europe in the case of selected large EU member countries;
- 3) analysis of the effects of the new screening mechanisms on Chinese high-tech investments in the EU;
- 4) discussion about relevant research results achieved.

The systematic review is focused on an objective discussion and relevant conclusion about the given topic. Many extensive studies (over 70 professional articles worldwide) on the given topic were analyzed, and the decisive results were summarized by the authors using the expert methods mostly.

The first part of the research results will map the Chinese OFDI flows to the EU countries. The second part will describe the policy responses on the EU member state level. The third part of the research results will look at the effects of the new policies on the level of total Chinese OFDI flows to Europe. The final part of the article focuses on the discussion of the results achieved and provides some recommendations for public authorities in the EU member countries.

### 3. GENERALIZATION OF THE MAIN STATEMENTS

Europe became an interesting FDI target region for China around the year 2000 when rapidly internationalizing Chinese corporations started

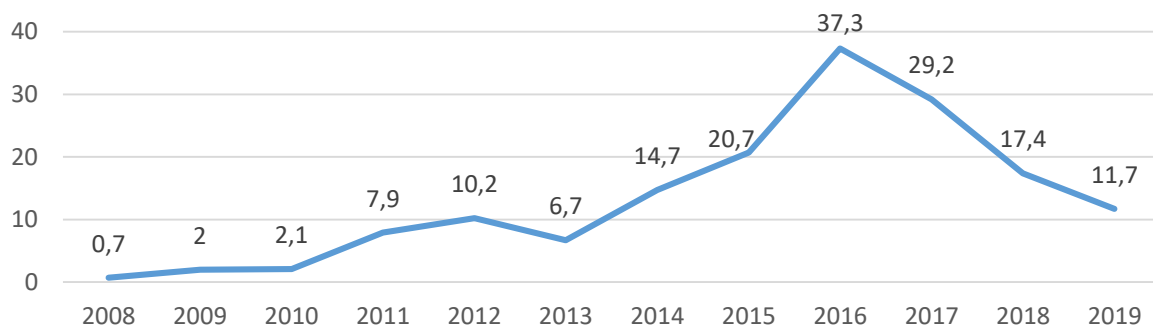
to target also markets of traditional developed countries. Despite the rising interest of Chinese corporations, FDI inflows into Europe were still dominated by other developed countries (mainly the USA), and China did not belong to the top 10 investors in Europe. This was caused by the dominance of mergers and acquisitions (M&A) in FDI inflows in Europe, and transnational corporations from developed countries did most M&A deals. The dynamic growth of the global economy between 2002 and 2007 led to an M&A strategy boom in economically developed countries, as many global companies wanted to improve their competitive position in their key markets.

The situation started to change after the global economic crisis of 2008–2009 that left an investment gap in Europe. Chinese corporations did not hesitate to use the investment possibilities in Europe and increased their FDI activities considerably after 2010. As there are large discrepancies between the official Chinese FDI statistical data (MOFCOM) and the Eurostat data, the database of global think tank Rhodium is used to document the Chinese FDI activities in the EU after the year 2000.

According to the Rhodium Group database, Chinese companies completed 1,047 investment projects between 2000 and 2014 in the EU member states, with a total value of USD 46 billion. Chinese investors preferred greenfield projects (726), but the average value of the M&A strategic investment projects was higher (Hanemann & Houtari, 2017).

The trends of Chinese FDI inflows to EU countries are documented in Figure 2, which shows

Source: Own elaboration based on the data of the Rhodium Group database.



**Figure 2.** Chinese FDI flows to the EU between 2008 and 2019 (USD billion)

a 35-fold increase between 2008 and 2016. After 2017, there was a visible decline of Chinese FDI in the EU, mostly due to tighter capital controls and political backlash against Chinese investors (see research results further). The regional distribution of Chinese OFDI in the EU countries shows a high concentration of flows in the large EU economies. Between 2010 and 2016, the so-called “Big Three” (Germany, UK, France) received the largest portion of Chinese OFDI heading into the EU countries, with an average share of 49.9 percent (Hanemann & Houtari, 2017). This strong concentration of Chinese OFDI in the EU can be explained by the determinants of strategic management decisions of Chinese companies focusing on the large markets and advanced technologies.

### 3.1. Chinese high-tech acquisitions in the EU countries after 2010

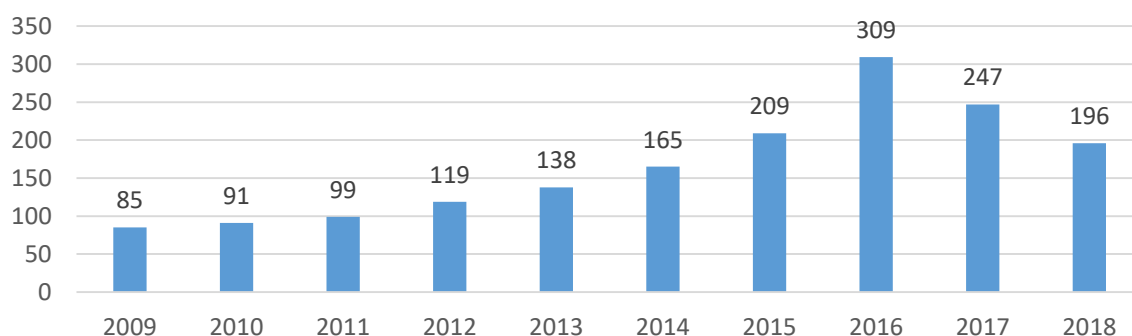
The previous section contains a clear demonstration of the increasing inflow of Chinese FDI into the EU. However, even in 2016, with a record inflow, they still constituted a relatively small share of the total FDI inflows to Europe. Despite this fact, experts and policymakers started to notice the Chinese OFDI, especially cross-border acquisitions. The number of these transactions increased steadily after 2010 and reached its highest point in 2016, with 309 acquisitions involving Chinese investors (Figure 3).

Chinese companies’ cross-border acquisition of high-tech companies is perhaps the most prolific in Germany, where Chinese investors acquired an increasing number of these companies after 2010. In the first wave, Chinese investors purchased smaller German tech companies that of-

ten had financial problems. The acquisition of German electronics company Medion by the Chinese computer giant Lenovo was the largest transaction of the first wave, with an estimated value of EUR 530 million (Popławski, 2017). This acquisition was not a high-tech oriented transaction. As such, the main motive for Lenovo was to increase market share in the European PC market. Medion was not a cutting-edge company; its business strategy was to sell affordable computers and electronic devices (Lee & Soh, 2011). In 2012, Chinese construction equipment manufacturer Sany Heavy Industry acquired the German concrete pump producer Putzmeister, a middle-sized family-owned company, for approximately EUR 360 million. This was the first time German media and politicians noticed Chinese acquisitions in Germany, and the employees of Putzmeister protested against the transaction as they feared the loss of workplaces (Copley, 2016). However, overall, Chinese investors were still welcome in Germany, as German policymakers were aware of the asymmetric nature of the FDI flows between China and Germany.

The situation started to change after 2014 when Chinese companies started to make bids for leading German high-tech companies. As Chinese investors acquired German companies such as Avic (aeronautic equipment), Krauss-Maffei (plastic and rubber goods), or EEW Energy (renewable energy), German policymakers were seeing a worrying trend – acquiring progressive technologies while taking advantages of the low market evaluation of these companies (Popławski, 2017). However, the main turning point came in 2016 when it became public that Chinese home appliance maker Midea wants to purchase a con-

Source: Own elaborations based on EY 2019.



**Figure 3.** Number of acquisitions involving Chinese investors in Europe



trolling stake in Kuka company – world-leading German manufacturer of industrial robots and supplier of intelligent automation solutions. The German government tried to block the deal with a plan to find a European electro-technical company to compete with Midea, but all the potential buyers considered the Chinese bid of USD 5 billion too high. Midea could ultimately purchase a controlling stake in Kuka despite the actions of the German government. However, this transaction brought many tensions into the Sino-German economic relations, especially as the Chinese government continued to block the investment of European companies in China (Hooijmaaijers, 2019). This acquisition made the German government realize that it does not have enough instruments to control the acquisitions by Chinese companies of their competitors in Germany and, therefore, it is vital for the future to create such instruments.

Although Germany seemed to be the main country of interest for Chinese investors, takeovers of high-tech firms by Chinese companies are not limited only to this country. In the UK, a Chinese consortium acquired a controlling stake in the data center operator Global Switch with the total value of the investment reaching USD 7.7 billion, and a China-backed private-equity company acquired British chip-making Imagination Technologies for approximately USD 744 million in 2017 (Kollewe, 2017). In France, Chinese Dongfeng Motor Group became the largest shareholder in the key European automotive producer PSA Group 2014, and Chinese investors made several sizable acquisitions in the French energy sector. In 2011, the French utility giant GDF Suez reached a deal with the Chinese sovereign-wealth fund China Investment Corp. to sell a 30% stake in its exploration and production business for approximately EUR 3 billion (Colchester, 2011).

European policymakers are especially concerned by the acquisitions made by Chinese state-owned companies. Chinese state-owned chemical company ChemChina is an outstanding example of the international expansion of these companies, as it started to acquire European companies in 2006 when it acquired the Adisseo Group and parts of Rhodia in France. In 2015, the expan-

sion of ChemChina reached a new level when it acquired a controlling stake in the Italian Pirelli tiremaker for USD 7.1 billion. However, the biggest international bid of ChemChina took place in 2016 when it successfully took over the Swiss Syngenta, a global player in the seeds and pesticides business. The total value of this transaction reached USD 43 billion, which made this transaction the largest ever foreign purchase by a Chinese firm (Baroncelli & Landoni, 2019). With this deal, ChemChina purchased cutting-edge technologies in the synthesis and development of new agricultural chemistry, genetic modification of crop seeds, and the development of biological pesticides, but also increased the fears of European policymakers about Chinese investors purchasing European patents and technologies and transferring them to China.

The case of German semiconductor firm Aixtron was perhaps the most controversial acquisition proposal made by a Chinese company. This high-tech company run into financial troubles and, in May 2016, received a take-over proposal from the Chinese Fujian Grand Chip Investment. The Chinese investment fund was prepared to pay 676 million for Aixtron, which the company's management viewed as a generous offer (Handelsblatt, 2016). After several weeks, despite the initial approval from the German government, it withdrew its support and reopened a review of the transaction. It is highly probable that this decision was US national security concerns as US intelligence services were concerned that China might use Aixtron's devices to produce chips for its nuclear program. Moreover, the attitude against Chinese OFDI started to change in Germany, and various German government representatives expressed their displeasure with these investments in the investment conditions faced by German companies in China (Hooijmaaijers, 2019). Eventually, the US government made the final decision, as the Obama administration decided to block the purchase of the US subsidiary of Aixtron. This made the takeover impossible and the proposed deal collapsed. Even though the US government ultimately blocked the deal, it became clear that there is a need for a legal basis to block state-backed moves on strategic industries on the EU level (Valero, 2017).

### 3.2. Policy responses to Chinese OFDI in Europe on the level of the nation and the EU

It is visible that the rising level of Chinese high-tech acquisitions in the EU led to a backlash in the countries most touched by this phenomenon. Policymakers started to propose a tough screening process for acquisitions of strategic domestic companies by foreign investors on the national level and started to push for a tough stance on the EU level (Table 1).

Not surprisingly, Germany was the first EU member country to tighten FDI regulation. Germany already had a screening procedure for non-EU/non-EFTA investors acquiring 25% or more of the voting rights in a German company. In 2018, the German government lowered the FDI screening threshold to 10% for acquisitions by non-German investors of German businesses active in the defense and encryption sector and for acquisitions by non-European investors of businesses active in industries qualify as critical infrastructure. Additionally, the list of businesses that qualify as critical infrastructure was also broadened to include broadcasting, television, and print media (BDI, 2020). More changes are expected in 2020, as the government wants to comply with the European foreign investment screening regulation that entered into force in 2019.

In France, the government also tightened the FDI screening process. In November 2018, the French government published a decree that extended the

scope of foreign investment screening to cover new sectors and industries, which are essential to guaranteeing national interests in matters of public order, public security, or national defense. The new sectors included space operations, cybersecurity, artificial intelligence, robotics, or data storage connected to public security (Investment Policy Hub, 2018). In 2019, the French government introduced the so-called PACTE law that strengthens the government sanctions if foreign investors do not comply with French FDI regulations and reinforce the powers of the Minister for the Economy (Investment Policy Hub, 2019).

The UK followed the path of other major EU member countries and introduced a tighter FDI screening process. The UK government lowered the merger control thresholds for transactions in certain sectors to have a wider mandate to inspect foreign investments and transactions that raise national security concerns. After these changes, the British government could intervene in the cases, where one of the following conditions have been met – the turnover of the target company exceeds GBP 1 million or the target company has a share of supply or purchase of at least 25% of any goods or services in the defined sectors (Hogan Lovells, 2018). Furthermore, the British government is planning long-term reforms to its FDI screening mechanisms to be able to intervene in strategic sectors more effectively.

Italy also belonged to the EU countries that witnessed an increase in Chinese OFDI in the form of acquisitions. Consequently, the Italian gov-

**Table 1.** National-level screening mechanisms and changes since 2017 in selected EU member states

Source: Own elaboration, according to Hanemann, Houtari, and Kratz (2019).

Country	Year of change	Status quo, recent or upcoming changes
France	2018	In 2018, the list of sensitive sectors for review and approval had been expanded. New areas include cybersecurity, artificial intelligence, robotics, semiconductors, or space operations
Germany	2017–2018	Regulations were amended in 2017 to facilitate a wider control of FDI corporate takeovers with a focus on critical sectors. In 2018, FDI screening rules were tightened to allow the review of any transaction in which a non-European foreign company plans to buy more than ten percent of a German firm in sensitive sectors
Hungary	2018–2019	In 2018, the Hungarian government implemented new rules of FDI screening that require companies with non-EU shareholders to obtain government consent before acquiring assets in national security-related areas
Italy	2017	In 2017, the Italian government expanded its so-called “golden powers” that enable the power of veto in strategic sectors (e.g., data storage and processing, robotics, semiconductors, artificial intelligence, or space technology)
UK	2018–2019	In 2018, the UK government expanded its powers to review mergers and acquisitions. The threshold for screening has been lowered from GBP 70 million to GBP 1 million in military, dual-use, and high-tech sectors. An even stricter regime is expected to come in force in 2020



ernment introduced new legislation to improve its screening process in strategic areas. With the introduction of the Law Decree No. 64/2019, the Italian government strengthened its powers of intervention in deals involving companies operating in defense, national security, communications, energy, transport, and 5G technologies. With the new regulation, the Italian government gained a longer period to assess the risks of proposed transactions to national security. It could introduce a new set of new criteria in determining whether an investment by a non-EU entity might be prejudicial to national security or public order. The powers of the government to object to the acquisition when entities outside the European Union acquire a level of shareholding with voting rights, which can jeopardize defense and national security, have also been extended (Hogan Lovells, 2019).

The increasing number of Chinese acquisitions in Europe ultimately led to policy action on the EU level. In early 2017, Germany, France and Italy sent a letter to the European Commission, arguing that the EU member countries should gain more scope to investigate individual takeovers and block them if necessary (Chazan, 2017). Despite the push from Berlin, Paris, and Rome, not all member countries agreed whether it is reasonable to create an EU mechanism to protect strategic sectors from foreign acquisitions. Member states with better ties to China (e.g., Greece, Portugal, or Slovakia) have been reluctant, but eventually, the European Commission offered a new model for FDI screening in September 2017 (Hooijmaaijers, 2019). The new framework based on the proposal from 2017 entered into force in 2019 and introduced a new mechanism through which the member countries and the European Commission can cooperate on incoming foreign direct investments affecting security and public order.

In the new model, the European Commission can request additional information from the member states on individual transactions and can issue opinions if the transaction poses a threat to the security or public order of more than one-member country or endangers a program of interest to the whole EU. The member states must provide the information on the investment upon request from the Commission and have to notify it about cases that undergo national screening. In addition to the Commission, other member states can also request

additional information and provide comments about investments taking place in other member states. On the other hand, member states where the investment takes place must take into account the comments and opinions received, but they have the final word on how to treat the investment (European Commission, 2019).

Member states also had to inform the European Commission about their national investment screening mechanisms. At the time of the adoption of the new EU model, 14 member states had national screening mechanisms in place and 18 month transition period has been put into place to give the member states time to take the necessary steps to assure that the EU can fully apply the Investment Screening Regulation as of October 11, 2020. The most important tasks include creating the new EU-wide mechanism for cooperation, enabling member countries and the commission to exchange information and raise concerns about specific foreign investments (European Commission, 2019).

As the EU views non-discrimination toward an investor's nationality is a core principle, the new FDI screening rules are not explicitly aimed at China. However, it is hard to deny that some of its provisions overlap with the core characteristics of Chinese OFDI in Europe. Firstly, many of the areas and sectors earmarked for special scrutiny under the new EU rules are preferred sectors for Chinese investors in Europe – typically high-tech sectors. Secondly, the new rules are often directly or indirectly aimed at state-owned entities that make up a large share of the Chinese OFDI to Europe. Finally, the new regulation encourages the EU countries to review investments that form part of “state-led outward projects or programs.” This is a clear shot in China and its state-led industrial strategies such as Made in China 2025 (Hanemann, Houtari, & Kratz, 2019).

### 3.3. Effects of the new screening mechanisms on the Chinese high-tech investments in Europe after 2016

As the EU member countries started to implement stricter screening mechanisms for acquisitions in strategic sectors, the question is, how Chinese

OFDI flows to the EU reacted to the changing environment. The first look at the available data shows that Chinese investments in Europe started to decline sharply after 2016. In 2017, Chinese OFDI to EU declined from the record level of the previous year to EUR 29.1 billion, and this decline further accelerated in 2018, when Chinese investments fell to USD 17.3 billion. This meant a 50 percent decline from the peak in 2016 (Hanemann, Houtari, & Kratz, 2019).

It is tempting to state that the drop in the Chinese OFDI flows to Europe was caused by the stricter screening mechanisms in the EU, but that is not entirely true. The tougher regulation in the big EU member countries such as Germany, France, and the UK, played a certain role, but capital controls and tightening of liquidity in China must be considered the primary factor of the Chinese OFDI slowdown. After a decade of strong growth of OFDI, the Chinese government started to issue administrative controls to deal with the high capital outflows. Chinese policymakers started to pressure highly leveraged firms to sell off foreign assets, and they also reduced liquidity in the financial system, thus, drying out financing channels for possible foreign investments (Hanemann, Houtari, & Kratz, 2019).

However, the changing sentiment against Chinese high-tech acquisitions was noticeable in the EU after 2016, and the stricter FDI screening procedures led to some blocked transactions that would have been approved in the previous years. In Germany, the government used its new regulatory powers for the first time in 2018, when it effectively blocked the takeover of Leifeld Metal Spinning AG by the Chinese Yantai Taihai corporation. With approximately 200 employees and a yearly turnover of EUR 40 million, Leifeld is not a large company, but the German government decided after a thorough review of the transaction that it would put the public order or safety in Germany at risk. As the details of FDI reviews are kept secret in Germany, the exact details are not known, but Leifeld was probably marked as a technology leader for machine tools that can process high-strength materials to produce the components for the aviation and aerospace industry (Hilf, Röhling, & Braun, 2018). Ultimately, Yantai dropped its takeover bid, as it was clear that the German government would block this transaction.

In 2018, the German government also intervened in the acquisition of 50 Hertz, a leading German power grid operator. Although the planned stake of the Chinese investor was under the 25 percent threshold for FDI screening (20 percent), the German government could use its political influence to persuade Elia (the majority shareholder of 50 Hertz) to exercise its pre-emption right also for the stake and to immediately sell the 20 percent tranche to the German state-owned development bank KfW. The German government justified its intervention with security policy considerations, most notably a reliable power supply (Bickenbach & Liu, 2018).

As the new EU framework for FDI screening will enter into force only in the second half of 2020, it is hard to tell the full effect of the changes on the potential Chinese takeovers of European high-tech companies. Nevertheless, the events of the last several years clearly show that many EU member states view Chinese acquisition with a growing suspicion, especially if the potential investor is a state-owned entity. Therefore, Chinese investors will face an even higher level of scrutiny in the future, especially given the fact that 82 percent of the Chinese acquisitions in 2018 would fall under at least one criterion of the new EU framework (Hanemann, Huotari, & Kratz, 2019).

## 4. DISCUSSION

The business cases provided in this paper (Putzmeister, Midea, Kuka, Imagination Technologies, and others) are clearly in line with the research results published by Buysse and Essers (2019) or Sauvart and Chen (2013) who state that the acquisition of new technologies is one of the key motives of Chinese FDI in the EU. There is ample evidence that there was an above-average interest from Chinese investors to acquire European high-tech companies, especially those with financial problems. Moreover, Chinese investors were ready to offer such generous financial terms that were not financially viable for European competitors. On the other hand, there is no evidence that the new Chinese owners are transferring know-how and technologies to China, as suggested by some authors (e.g., Poplawski, 2017).

Still, the increasing activities of Chinese companies in the EU created a political backlash, especially the acquisitions of Chinese state-owned enterprises (see Baroncelli & Landoni, 2019). As Chinese investors target high-tech companies, mainly in Western Europe, the political backlash was the strongest in these countries. In contrast, Chinese companies in Central Europe prefer greenfield investments as the entry method to local markets, so governments in these countries are more welcoming to Chinese capital (see Dudas & Dudasova, 2016; Matura, 2019; M. Grančay & N. Grančay, 2017). The leadership of the large Western European economies is also visible in the processes on the EU level, as Germany, France, and Italy initiated the establishment of the common EU framework for FDI screening.

Tougher regulations in the EU certainly played a role in the decreasing FDI inflows from China to the EU after 2016 (Figure 3). Chinese investors became more cautious, especially state-owned enterprises. Chinese companies started to prefer research and development cooperation with European companies instead of outright acqui-

sitions because this type of behavior attracted less attention and could still provide the Chinese companies with cutting-edge technologies (Kratz, Huotari, Hanemann, & Arcesati, 2019).

Despite the declining level of Chinese FDI inflows to the EU, member countries (including CEE countries) and their public authorities should closely monitor these transactions, especially if there are state-owned companies involved. As the full implementation of the new EU framework for the screening of foreign direct investments is drawing closer (October 2020), all the EU member states must make their FDI screening mechanism fully compatible with the EU framework. Without this, it will not be able to function effectively.

Despite the growing body of data, the limitations of the research of Chinese FDI inflows to the EU have to be stated. The timeframe is still relatively short, relevant Chinese FDI inflows started to appear only after 2010, and they peaked in 2016. Additionally, the data on Chinese FDI outflows are notoriously unreliable, with Chinese and EU sources often providing different figures.

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## CONCLUSION

There is no doubt that the Chinese government conducts a long-term set of coordinated economic policies to close the gap between China and the technological leaders in the global economy. The acquisition of high-tech companies in Europe and the US is a vital part of this strategy, as Chinese companies use these transactions to obtain cutting-edge technologies. The article identified the growth of these acquisitions in the EU countries after 2010 and provided numerous examples of these acquisitions. The largest number of Chinese acquisitions took place in Germany, which increased the suspicions against Chinese companies and prompted policymakers to strengthen the FDI screening procedures.

Similar developments also happened in other EU member states, which led to the creation of a new EU framework for FDI screening. Tougher regulations in the EU certainly played a role in the decreasing FDI inflows from China to the EU after 2016. This regulatory framework is not targeting Chinese companies openly, but the details of the provisions point at them. When the EU framework enters into effect in late 2020, potential acquisitions of high-tech companies in the EU member states by Chinese companies will be put under much more detailed scrutiny. Despite the declining level of Chinese FDI inflows to the EU, member countries (including CEE countries) and their public authorities should closely monitor these transactions, especially if there are state-owned companies involved. As the full implementation of the new EU framework for the screening of foreign direct investments is drawing closer (October 2020), all the EU member states must make their FDI screening mechanism fully compatible with the EU framework.

On the other hand, the ongoing COVID-19 global pandemic will cause deep problems in the global economy, and the coming recession will put at least a temporary halt on Chinese acquisitions of foreign

companies. Still, it is also possible that Chinese investors will try to take over European companies that got into vulnerable financial position caused by the economic crisis caused by COVID-19. In the future, further research efforts will be needed to analyze this development and present additional results.

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## REFERENCES

- Baroncelli, A., & Landoni, M. (2019). Chinese State-Owned Enterprises in the Market for Corporate Control. Evidences and Rationalities of Acquisition in Western Countries. In A. Vecchi (Ed.), *Chinese Acquisitions in Developed Countries: Operational Challenges and Opportunities* (pp. 17-36). Cham: Springer. Retrieved from <https://www.springerprofessional.de/en/chinese-state-owned-enterprises-in-the-market-for-corporate-cont/16345196>
- BDI. (2020). *Investment Screening Becomes More Rigorous*. Retrieved from <https://english.bdi.eu/article/news/investment-screening-becomes-more-rigorous/>
- Bickenbach, F., & Liu, W. H. (2018). Chinese direct investment in Europe – Challenges for EU FDI policy. *CESifo Forum*, 19(4), 15-22. Retrieved from <https://www.ifo.de/DocDL/CESifo%20Forum-2018-4-bickenbach-liu-chinese-FDI-december.pdf>
- Bilan, Y., Vasylieva, T., Lyeonov, S., & Tiutiunyk, I. (2019). Shadow Economy and its Impact on Demand at the Investment Market of the Country. *Entrepreneurial Business and Economics Review*, 7(2), 27-43. <https://doi.org/10.15678/EBER.2019.070202>
- Blomkvist, K., & Drogendijk, R. (2016). Chinese outward foreign direct investments in Europe. *European Journal of International Management*, 10(3), 343. <https://doi.org/10.1504/ejim.2016.076242>
- Busse, M., Erdogan, C., & Mühlen, H. (2016). China's impact on Africa - the role of trade, FDI and aid. *Kyklos*, 69(2), 228-262. <https://doi.org/10.1111/kykl.12110>
- Buyse, K., & Essers, D. (2019). Cheating tiger, tech-savvy dragon: are Western concerns about “unfair trade” and “Made in China 2025” justified? *NBB Economic Review*, 2, 47-70. Retrieved from [https://www.nbb.be/doc/ts/publications/economicreview/2019/ecorev-ii2019\\_h3.pdf](https://www.nbb.be/doc/ts/publications/economicreview/2019/ecorev-ii2019_h3.pdf)
- Callaghan, M., & Hubbard, P. (2016). The Asian infrastructure investment bank: Multilateralism on the silk road. *China Economic Journal*, 9(2), 116-139. <https://doi.org/10.1080/17538963.2016.1162970>
- Chazan, G. (2017). EU Capitals Seek Stronger Right of Veto on Chinese Takeovers. *Financial Times*. Retrieved from <https://www.ft.com/content/8c4a2f70-f2d1-11e6-95ee-f14e55513608>
- Colchester, M. (2011). GDF Close to China Investment Deal. *The Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/SB10001424053111904007304576495581220556242>



11. Copley, C. (2016). As China Shops for German Firms, One Early Example Reassures. *Reuters*. Retrieved from <https://www.reuters.com/article/us-putzmeister-sany-insight/as-china-shops-for-german-firms-one-early-example-reassures-idUSKCN0YO2IA>
12. Deng, P. (2009). Why do Chinese firms tend to acquire strategic assets in international expansion? *Journal of World Business*, 44(1), 74-84. <https://doi.org/10.1016/j.jwb.2008.03.014>
13. Dreger, C., Schüler-Zhou, Y., & Schüller, M. (2017). Determinants of Chinese direct investments in the European Union. *Applied Economics*, 49(42), 4231-4240. <https://doi.org/10.1080/00036846.2017.1279269>
14. Dudas, T., & Dudasova, M. (2016). Growth of Chinese investments in Europe after the global economic crisis of 2008–2009. *Economic Annals-XXI*, 160(7-8), 9-14. <https://doi.org/10.21003/ea.V160-02>
15. Dunning, J. H. (1993). *Multinational enterprises and the global economy*. Wokingham: Addison-Wesley.
16. European Commission. (2019). *EU Foreign Investment Screening Regulation Enters into Force*. Retrieved from <http://trade.ec.europa.eu/doclib/press/index.cfm?id=2008>
17. EY. (2019). *Chinesische Unternehmenskäufe in Europa. Eine Analyse von M&A-Deals 2006–2018*. Retrieved from [https://www.eylaw.com.hk/Publication/vwLUAssets/ey-chinesische-unternehmenskaeufe-und-beteiligungen-in-europa-august-2019-schweiz/\\$FILE/ey-chinesische-unternehmenskaeufe-und-beteiligungen-in-europa-august-2019-schweiz.pdf](https://www.eylaw.com.hk/Publication/vwLUAssets/ey-chinesische-unternehmenskaeufe-und-beteiligungen-in-europa-august-2019-schweiz/$FILE/ey-chinesische-unternehmenskaeufe-und-beteiligungen-in-europa-august-2019-schweiz.pdf) (accessed on March 16, 2020).
18. Grančay, M., & Grančay, N. (2017). Foreign Direct Investment in Slovakia: The Tatra Tiger Gone Tame? In B. Szent-Iványi (Ed.), *Foreign Direct Investment in Central and Eastern Europe* (pp. 77-98). Cham: Palgrave Macmillan. [https://doi.org/10.1007/978-3-319-40496-7\\_4](https://doi.org/10.1007/978-3-319-40496-7_4)
19. Grančay, M., & Szikorová, N. (2014). Determinants of Chinese Outward Direct Investment in Africa. *Ekonomický časopis – Economic magazine*, 3, 307-325. Retrieved from <https://www.sav.sk/journals/uploads/0620143403%2014%20Szikorova-Grancay+RS-F.pdf>
20. Hanemann, T., & Huotari, M. (2015). *Chinese FDI in Europe and Germany. Preparing for a New Era of Chinese Capital* (MERICS Papers on China). Retrieved from [https://www.merics.org/sites/default/files/2018-07/COFDI\\_2015\\_EN\\_web.pdf](https://www.merics.org/sites/default/files/2018-07/COFDI_2015_EN_web.pdf)
21. Hanemann, T., & Huotari, M. (2017). *Record flows and growing imbalances. Chinese investment in Europe* (MERICS Papers on China). Retrieved from [https://www.merics.org/sites/default/files/2018-07/MPOC\\_3\\_COFDI\\_2017\\_web.pdf](https://www.merics.org/sites/default/files/2018-07/MPOC_3_COFDI_2017_web.pdf)
22. Hanemann, T., Huotari, M., & Kratz, A. (2019). *Chinese FDI in Europe: 2018 trends and impact of new screening policies* (MERICS Papers on China). Retrieved from [https://www.merics.org/sites/default/files/2019-03/190311\\_MERICS-Rhodium%20Group\\_COFDI-Update\\_2019.pdf](https://www.merics.org/sites/default/files/2019-03/190311_MERICS-Rhodium%20Group_COFDI-Update_2019.pdf)
23. Hilf, J., Röhling, F., & Braun, H. (2018). *German Foreign Investment Authority Takes off the Gloves*. Freshfields Bruckhaus Deringer. Retrieved from [http://knowledge.freshfields.com/m/Global/r/3808/german\\_foreign\\_investment\\_authority\\_takes\\_off\\_the\\_gloves](http://knowledge.freshfields.com/m/Global/r/3808/german_foreign_investment_authority_takes_off_the_gloves)
24. Hintošová, A. B., Bruothová, M., Kubíková, Z., & Ručinský, R. (2018). Determinants of foreign direct investment inflows: A case of the Visegrad countries. *Journal of International Studies*, 11(2), 222-235. <https://doi.org/10.14254/2071-8330.2018/11-2/15>
25. Hogan Lovells. (2018). *New UK Foreign Investment Screening Rules Come into Force*. Retrieved from <https://www.hoganlovells.com/en/publications/new-uk-foreign-investment-screening-rules-come-into-force>
26. Hogan Lovells. (2019). *Italian Government Acts to Strengthen Further its "Golden Powers"*. Retrieved from <http://ehoganlovells.com/cv/d283202bd474ba5cd9a6441660272364528fedc9>
27. Hooijmaaijers, B. (2019). Blackening Skies for Chinese Investment in the EU? *Journal of Chinese Political Science*, 24(3), 451-470. <https://doi.org/10.1007/s11366-019-09611-4>
28. Horta, I. M., Kapelko, M., Lansink, A. O., & Camanho, A. S. (2016). The impact of internationalization and diversification on construction industry performance. *International Journal of Strategic Property Management*, 20(2), 172-183. <https://doi.org/10.3846/1648715X.2015.1123201>
29. Huang, Y. (2016). Understanding China's Belt & Road initiative: motivation, framework and assessment. *China Economic Review*, 40, 314-321. <https://doi.org/10.1016/j.chieco.2016.07.007>
30. Investment Policy Hub. (2018). *France extends its foreign investment screening*. Retrieved from <https://investmentpolicy.unctad.org/investment-policy-monitor/measures/3334/france-france-extends-its-foreign-investment-screening->
31. Investment Policy Hub. (2019). *France Strengthens its FDI screening mechanism with "PACTE Act"*. Retrieved from <https://investment-policy.unctad.org/investment-policy-monitor/measures/3386/france-france-strengthens-its-fdi-screening-mechanism-with-pacte-act->
32. Ključnikov, A., Belás, J., Kozubíková, L., & Paseková, P. (2016). The Entrepreneurial Perception of SME Business Environment Quality in the Czech Republic. *Journal of Competitiveness*, 8(1), 66-78. <https://doi.org/10.7441/joc.2016.01.05>
33. Kollewe, J. (2017). UK Chip Maker Imagination Bought for £550m by China-backed Tech Firm. *The Guardian*. Retrieved from <https://www.theguardian.com/business/2017/sep/25/imagination-technologies-shares-canyon-bridge-takeover>
34. Kolstad, I., & Wiig, A. (2012). What determines Chinese outward FDI? *Journal of World*



- Business*, 47(1), 26-34. <https://doi.org/10.1016/j.jwb.2010.10.017>
35. Kratz, A., Huotari, M., Hanemann, T., & Arcesati, R. (2020). *Chinese FDI in Europe: 2019 Update. Special Topic: Research Collaborations* (MERICS Papers on China). Retrieved from [https://www.merics.org/sites/default/files/2020-05/MERICS-Rhodium%20Group\\_COFDI-Update-2020\\_3.pdf](https://www.merics.org/sites/default/files/2020-05/MERICS-Rhodium%20Group_COFDI-Update-2020_3.pdf)
36. Lee, Ch. Y., & Soh, K. (2011). Lenovo Buys German Computer Seller Medion for \$ 900 Million. *Reuters*. Retrieved from <https://www.reuters.com/article/us-lenovo/lenovo-buys-german-computer-seller-medion-for-900-million-idUSTRE75010Y20110601>
37. Li, C., Luo, Y., & De Vita, G. (2020). Institutional difference and outward FDI: Evidence from China. *Empirical Economics*, 58(4), 1837-1862. <https://doi.org/10.1007/s00181-018-1564-y>
38. Liu, X., Buck, T., & Shu, C. (2005). Chinese economic development, the next stage: Outward FDI? *International Business Review*, 14(1), 97-115. <https://doi.org/10.1016/j.ibusrev.2004.12.003>
39. Matura, T. (2019). China – CEE trade, investment and politics. *Europe-Asia Studies*, 71(3), 388-407. <https://doi.org/10.1080/09668136.2019.1571166>
40. Perkmann, M. (2006). Extraregional Linkages and the Territorial Embeddedness of Multinational Branch Plants: Evidence from the South Tyrol Region in North-east Italy. *Economic Geography*, 82(4), 421-441. <https://doi.org/10.1111/j.1944-8287.2006.tb00324.x>
41. Popławski, K. (2017). Capital does have nationality: Germany's fears of Chinese investments. *OSW Commentary*, 230, 1-9. Retrieved from [http://aei.pitt.edu/83989/1/commentary\\_230.pdf](http://aei.pitt.edu/83989/1/commentary_230.pdf)
42. Rajnoha, R., Merková, M., Dobrovič, J., & Rózsa, Z. (2018). Business performance management and FDI: key differences between foreign and domestic-owned firms – a case of Slovakia. *Journal of Business Economics and Management*, 19(1), 42-62. <https://doi.org/10.3846/jbem.2018.1538>
43. Sauvant, K. P., & Chen, V. Z. (2014). China's regulatory framework for outward foreign direct investment. *China Economic Journal*, 7(1), 141-163. <https://doi.org/10.1080/17538963.2013.874072>
44. Scheuer, S., & Müller, A. (2016). Fujian Grand Offer: Chinese Firm Bids € 676 Million for Aixtron. *Handelsblatt*. Retrieved from <https://www.handelsblatt.com/today/companies/fujian-grand-offer-chinese-firm-bids-676-million-for-aixtron/23538068.html>
45. Shuyan, L., & Fabus, M. (2019). The impact of OFDI reverse technology spillover on China's technological progress: Analysis of provincial panel data. *Journal of International Studies*, 12(4), 325-336. <https://doi.org/10.14254/2071-8330.2019/12-4/21>
46. Simionescu, M. (2018). Effects of European economic integration on foreign direct investment: The case of Romania. *Economics and Sociology*, 11(4), 96-105. <https://doi.org/10.14254/2071-789X.2018/11-4/6>
47. Tan, K. (2017). Generic Internationalization Strategies of Emerging Market Multinationals: The Case of Chinese Firms. *Advances in Economics and Business*, 5(2), 83-94. <https://doi.org/10.13189/aeb.2017.050205>
48. Valero, J. (2017). Commission says proposal to block Chinese takeovers is worth discussing. *Euractiv*. Retrieved from <https://www.euractiv.com/section/trade-society/news/commission-says-proposal-to-block-chinese-takeovers-is-worth-discussing/>
49. Virglerová, Z., Homolka, L., Smrčka, L., Lazányi, K., & Klieštík, T. (2017). Key determinants of the quality of business environment of SMEs in the Czech Republic. *Ekonomika a Management*, 20(2), 87-100. <https://doi.org/10.15240/tul/001/2017-2-007>